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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/632,546

08/01/2003

Steven R. Miller

60130-1396/02MRA0126

2683

26096

7590

09/08/2005

CARLSON, GASKEY & OLDS, P.C.

400 WEST MAPLE ROAD

SUITE 350

BIRMINGHAM, MI 48009

EXAMINER

GOODEN JR, BARRY J

ART UNIT

PAPER NUMBER

3616

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,546

Applicant(s)

MILLER ET AL.

Examiner

Barry J. Gooden Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08/01/2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the laterally spaced apart air springs arranged between the frame and the lateral leaf spring must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 4 is objected to because of the following informalities: "opposing ends of said lateral leaf spring supports". There are not parts identified as lateral leaf spring supports having opposing ends; rather, as best understood, it is the opposing ends of said lateral leaf springs providing support to the knuckles, if this assumption is correct, the sentence may be rephrased, "opposing ends, of said lateral leaf spring, support". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 reads, "laterally spaced apart air springs arranged between said frame and one of said upper control arms and said lateral leaf spring;" however, it is not made clear how the air springs are to be arranged between the frame and the lateral leaf spring. Appropriate correction is required. No new matter should be entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young (US 2004/0051262) in view of Smith (US Patent 4,867,474). Young discloses a vehicle suspension comprising a frame (12), a pair of laterally spaced apart upper control arms (36a and 36b) pivotally supported by the frame at first pivotal connections (118a and 118b), a knuckle (26) connected to each of the upper control arms, a lateral leaf spring (34) interconnected between the lower portions of the knuckles (32) and laterally spaced apart coil over damper springs (112a and 112b) arranged between the frame and the upper control arms (Figures 5-7 and 12).

5. In regards to claims 1-7, Young discloses all of the claimed elements as previously discussed, except the laterally spaced apart air springs, pressurized air source and controller, valves, and valves being independently actuatable in response to commands from the controller. In regards to claims 1-4, Smith discloses air springs (14) acting in conjunction with dampers (24) (Figure 1). In regards to claim 5, Smith discloses a pressurized air source (29) and controller (11) (Figure 4). In regards to

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claim 6, Smith discloses valves (Figure 4, Items 38 and 42). In regards to claim 7, Smith discloses valves being independently actuatable in response to commands from the controller (Column 3, Lines 45-65). It would have been obvious to one having ordinary skill in the art at the time of invention to modify the suspension of Young such that it comprised air springs as claimed in Smith, so as to provide an adaptive vehicle suspension designed to provide enhanced ride characteristics as well as improved automatic load leveling and cornering control (Column 1, Lines 8-12).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Paton (US Patent 2,069,420) discloses a spring element arranged between an upper control arm and a frame (Figure 4). Pashkow (US Patent 4,273,357) discloses a control arm pivotally connected to a frame, the control arm being connected to a knuckle, and a control arm with a portion extending opposite the knuckle having an air spring arranged between the portion and the frame (Figure 2). Schroeder (US Patent 6,811,169) discloses a composite leaf spring acting as a lower connecting member attached to and supporting the lower portion of a knuckle, the knuckle also being attached to an upper control arm pivotally connected to the frame (Figure 3). Kajiwara (US Patent 4,903,984) discloses a suspension having an air spring located between the lower leaf spring member and the frame (Figures 1 and 2). Kitagawa discloses a suspension having an air spring located between a transverse, lower leaf spring and a frame (Figures 7 and 8). Pees (US Patent 4,934,667) discloses an air spring damper member replacing spring and damper members.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry J. Gooden Jr. whose telephone number is (571) 272-5135. The examiner can normally be reached on Monday-Friday 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Barry J Gooden Jr.
Examiner
Art Unit 3616

BJG


PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
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